

AMENDMENTS TO THE SPECIFICATION

Please replace the existing paragraph at page 27, line 21, which currently reads:

Figs. 3g, 3h, 3i, 3j, 6c, 7d, 8b, and 8c are flow diagrams.

with the following two paragraphs.

Figs. 3g, 6c, 7d, 8b, and 8c are flow diagrams.

Figs. 3h, 3i, and 3j are program pseudocode.

Kindly replace the Abstract with the following:

A computer binary translator translates at least a segment of a binary representation of a program from a first instruction set architecture to a second instruction set architecture. A sequence of side-effects in the translation differs from a sequence of side-effects in the original. The translation distinguishes memory loads that are believed to be directed to well-behaved memory from memory loads that are believed to be directed to non-well-behaved memory device(s). Instruction execution circuitry identifies a memory reference that has a side-effect that has been reordered by translation, the memory reference having been believed at translation time to be directed to well-behaved memory but at execution it is found that the reference cannot be guaranteed to be well-behaved. The instruction execution circuitry identifies whether the difference in side-effect order may have a material effect on the execution of the program. A roll-back program state is established, and execution of the original code resumes.